



THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY
DEPARTMENT OF MATHEMATICS & COMPUTER SCIENCE

FIRST SEMESTER EXAMINATIONS - 2022

FIRST YEAR BACHELOR OF FORESTRY &

SECOND YEAR BACHELOR OF SCIENCE IN APPLIED CHEMISTRY

CS113B – INTRODUCTION TO ICT

TIME ALLOWED: 3 HOURS

INFORMATION FOR CANDIDATES

1. Write your name and student number clearly on the front of the answer booklet.
2. You have 10 minutes to read this paper. You must not begin writing during this time.
3. There are **two (2)** parts in this examination. You should answer all questions.
4. All answers must be written in answer booklets only. No other written material will be accepted.
5. Write all answers for PART A on one page. As for PART B, start the answer for on a new page. Do **not** use red ink.
6. Notes and textbooks are not allowed in the examination room. All mobile phones and electronic/recording devices must be switched off during the examination.
7. Scientific and business calculators are allowed in the examination room.

MARKING SCHEME

Marks are indicated at the beginning of each question. They total 100.

PART A: MULTIPLE CHOICE QUESTIONS

Questions 1 to 15 are multiple choice questions. Choose only one answer or more than one where required. You must answer all questions. Each question is worth 1 mark each and they total 15.

Question 1

Which of the earlier inventors was called the father of modern computer?

- (a) Charles Babbage.
- (b) Lady Augusta Ada Byron.
- (c) Herman Hollerith.
- (d) Howard. H. Aiken.

Question 2

What is data?

- (a) Unprocessed information.
- (b) Processed information.
- (c) Raw information.
- (d) Both (a) and (c) are correct.

Question 3

What is information?

- (a) It is the processed data.
- (b) It is some information that is raw and yet to be processed.
- (c) It is a device that is used to process the data.
- (d) None of the above.

Question 4

What is hardware?

- (a) Tells the computer what to do.
- (b) Peripheral device used to input data into and get information out of the computer.
- (c) Supports the hardware to output the information.
- (d) Piece of information.

Question 5

What is software?

- (a) Is a piece of information about a person.
- (b) Anything that can be touched.
- (c) Tangible components of a computer system.
- (d) Is a collection of data or computer instructions that tells the computer how to work.

Question 6

Which of these are hardware?

- (a) MS Word and keyboard.
- (b) PDF editor and Google Chrome.
- (c) Keyboard and mouse.
- (d) CPU and Excel.

Question 7

Which of these are software?

- (a) Keyboard and mouse.
- (b) Mac OS and Google Chrome.
- (c) CPU and processor.
- (d) Ubuntu and fan.

Question 8

Which of these are application software?

- (a) Mac OS and MS Office Word.
- (b) Microsoft Office Word and Google Chrome.
- (c) Windows XP and external drive.
- (d) Windows XP and Ubuntu.

Question 9

Which of these are system software?

- (a) Windows XP and Ubuntu.
- (b) Windows XP and external drive.
- (c) MS Office Excel and MS Office Word.
- (d) CLI and GUI.

Question 10

Which of these are classical examples of storage devices?

- (a) HDD, CD and CPU.
- (b) SD card, HDD and mouse.
- (c) External drive, CD and flash drive.
- (d) SD card, RAM and RUN.

Question 11

What does volatile storage mean?

- (a) It retains the data even when the computer is switched off.
- (b) It only stores the data whilst the computer is switched on.
- (c) It retains and stores the data when the computer is switched off.
- (d) All of the above.

Question 12

What does non-volatile storage mean?

- (a) It only stores the data whilst the computer is switched on.
- (b) It retains the data even when the computer is switched off.
- (c) It does not retain nor store data when the computer is switched on.
- (d) None of the above.

Question 13

The first computers in the history of computers were called

- (a) Abacus.
- (b) ENIAC.
- (c) People.
- (d) None of the above.

Question 14

The main storage device of the computer. It is where most of the files of the computer (such as the ones found in Desktop) are stored. The name of it is

- (a) Hard Disk Drive.
- (b) Processor.
- (c) CPU.
- (d) Optical Disc Drive.

Question 15

Which network is the largest in the world?

- (a) Wireless Local Area Network (WLAN).
- (b) Internet.
- (c) Metropolitan Area Network (MAN).
- (d) Local Area Network (LAN).

QUESTION B: SHORT AND LONG ANSWER QUESTIONS

Write clearly in the space answer booklet your answers for questions 16 and 17.

Question 16 [2 + 3 + 3 + 3 + 2 = 13 marks]

- (a) Explain what the term “Debugging” means in creating computer programs.
- (b) What is ICT? State your explanation.
- (c) State the main difference between the System Software and the Application Software.
- (d) What is a user interface and name the two types of user interface.
- (e) What is a backup?

Question 17 [3 + 1 + 8 + 3 + 2 = 17 marks]

- (a) What does the synonym CPU represent and also state what it is.
- (b) How many bits are required to form a byte?
- (c) Since the advent of the first computer, different types and sizes of computers are offering different services. Name the four basic types of computers in which all these computers come under.
- (d) State one difference between an input device and an output device.
- (e) What are storage devices?

Question 18 [4 + 4 + 8 + 2 + 3 = 21 marks]

- (a) Name any two external computer hardware components and also state their functions.

- (b) Name any two internal computer hardware components and also state their functions.
- (c) Name the four parts of the computer system.
- (d) What is a primary key in a table?
- (e) Name the three relationship types.

Question 19 [3 + 2 + 2 + 2 + 2 + 2 + 2 = 15 marks]

- (a) State the difference between a workbook and a worksheet.
- (b) What is the name of the very first cell in a worksheet?
- (c) What is the name given to the current cell in a worksheet?
- (d) Explain **absolute references** when copying and pasting a formula.

For questions (e), (f) and (g), refer to the ASCII table below.

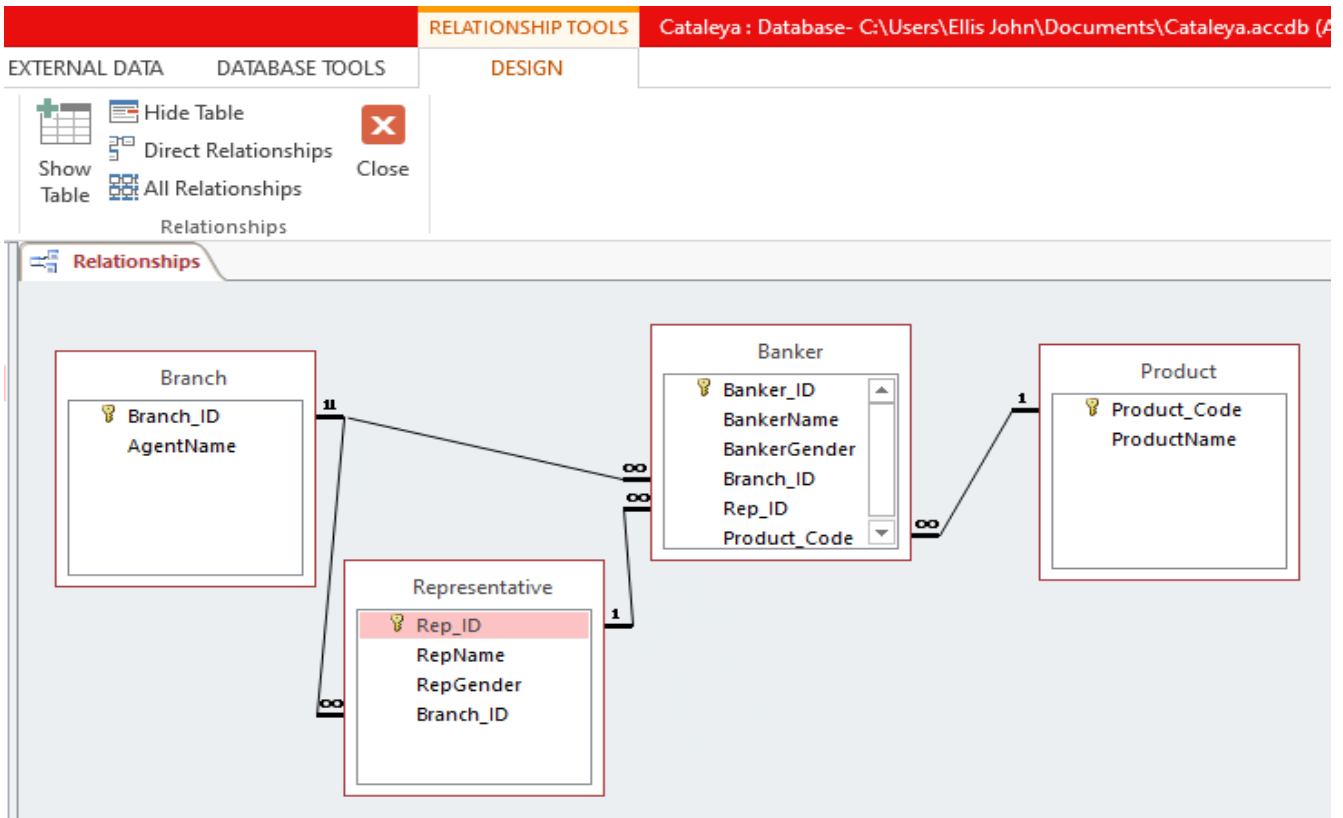
ASCII for Capital Letters				
65	A		78	N
66	B		79	O
67	C		80	P
68	D		81	Q
69	E		82	R
70	F		83	S
71	G		84	T
72	H		85	U
73	I		86	V

74	J		87	W
75	K		88	X
76	L		89	Y
77	M		90	Z

- (e) Identify and write the value of character X in binary format.
- (f) Compute the value of the ASCII character that is represented by the bits 11111111.
- (g) Compute the value of the decimal number that is represented by the bits 11111111.

Question 20 [4 + 3+ 4 + 2 + 2 + 2 + 2 = 19 marks]

For questions (a), (b) and (c), refer to the diagram below.



- (a) State the names of the attributes that are recognized as the primary keys in their respective tables.

- (b) State the names of the attributes that are recognized as the foreign key in the Banker table.
- (c) State the names of all the tables in the above diagram.

For questions (d), (e), (f), and (g), refer to the diagram below.

Clipboard		Font		Alignment		N		
B10				1.5				
	A	B	C	D	E	F	G	H
1								
2								
3	Kombo Inventory							
4								
5	Item Nam	Unit Cost	Item Count	total Cost	Price	Total Revenue	Profit	
6	Apple	2	10		4			
7	Gauva	1	21		2			
8	Banana	0.5	10		1			
9	Pineapple	3	50		5			
10	Orange	1.5	20		3			
11	Lemon	0.5	15		1			
12	Aibika	1	40		2			
13	Peanut	1	14		2			
14	Cucumber	1	30		2			
15	Cabbage	2	25		4			
16								
17								
18								
19								
20								

- (d) Write the formula in cell F16 that will display the total revenue that will be generated if all the items in the inventory are sold out.
- (e) Write the formula in cell D16 that will display the total cost for all the item in the inventory that are for sale.
- (f) Write the formula in cell G16 that will display the overall profit that will be generated if all the items in the inventory are sold out.
- (g) State the cell address for the current cell in the above diagram.

END OF EXAMINATION